EcoDHOME
WMTE-701 User Manual

WH701/WH711 WW/RF Thermostat

This product has the following features:

1) Heating control
2) Programmable function for 24-hours per day and 7-day per week
3) 2 sets of permanent programs (factory setting program and self-setting program)
4) Large LCD display
5) Adjustable range around set temperature;
6) Allowable to calibrate the temperature display;
7) Adjustable selection of comfort temperature, economic temperature, and antifreeze temperature;
8) Suitable for energy saving control of wall mounted boilers, condensation boilers and heating system valves within single and multi-zone systems;
9) A single receiver is able to control up to 4-off zones;
10) A single thermostat transmitter is able to control up to 7-off receivers;
11) Display adjustable between C and F.
12) 2 size AA 1.5V batteries for the power supply;.
13)Three transmission modes for selection, i.e. wired, wireless or multi-channel transmission.
14)Fast and Simple installation.

Applicable Standards:

EN60730-1 and its revisions
EN60730-2-7
EN60730-2-9

Compliant with the following EU directives:

EU B.T.73/23/EEC Directive
EU E.M.C.89/336/EEC Directive and 93/68/EEC Revision

Display screen symbols：

Fig.1

88.8 Present ambient temperature

Comfort temperature

Economic temperature

Antifreeze temperature

88:88 Present time

1 2 3 4 5 6 7 7 days display in a week, and the present day display is in the square frame

Program conditions

Running Symbol for the equipment

COPY COPY

ADJUST ADJUST

Battery charge

°E Celsius degree or Fahrenheit degree

AUTO Automatic operation mode

AUTO + Customer program mode

Manual operation mode

Antifreeze mode

Program setting mode

Temperature setting mode

Date/Time setting mode

Operation Key:

Menu key/ Power key

SET Set key

OK Confirmation key

▲ Increasing key

▼ Decreasing key

Alarm Display:

00.0**℃ Flash: Actual room temperature lower than 0℃**

45.0**℃ Flash: Actual room temperature higher than 45℃**

E0.1: Temperature probe(NTC) disconnected

Product Specifications:

Power: two LR6 1.5V alkaline batteries

Range of temperature adjustment: 5÷35**℃**/39÷95°F

Range of temperature display: 0÷40 °C/32÷104°F

Temperature test frequency: Every minute

Display accuracy: 0.1**℃**/1°F

Probe sensor: NTC(100K) 1%

Protection level: IP20

Output: Switch relay

Contact capacity: 8A/250V (WW model); 16A/250V (RF model); 5 A/250V(MRF model)

Insulating condition: Normal environment

Working environment temperature: -18÷50**℃**/0÷122°F

Running program: Set per 1 week as a cycle

Software level: A

Minimum allowable time for increase / decrease in program setting: 1 hour

Frequency: 433 MHz (RF/MRF)

Wireless transmission distance: Indoor 16 / 50 m; outdoor 200m (RF/MRF)

Size(mm): 77H*121W*21D

Installation: Wall mounted or on battery seat

Scope of Control Applications:

1. Control of wall-mounted boiler
2. Control of Thermal Actuator or electromagnetic valve
3. Control of water pump;
4. Ventilation control.

----------Run Mode----------

1. Factory Preset Mode:

In this case, the icon displayed on working state column is AUTO:

Factory preset program:
Monday to Friday:
00 : 00——06 : 00 Economic temperature
06 : 00——08 :00 Comfortable temperature
08 : 00——18 : 00 Antifreeze temperature
18 : 00——22 : 00 Comfortable temperature
22 : 00——24 : 00 Economic temperature
Saturday and Sunday:
00 : 00——06 : 00 Economic temperature
06 : 00——22 : 00 Comfortable temperature
22 : 00——24 : 00 Economic temperature

Display of Energy Consumption

The double ring on the lower right represents energy consumption that is controlled by the program in each time section. "Comfortable temperature" , economic temperature and the antifreeze temperature are set in the temperature setting .

2. User Defined Mode

In the user defined program, the icons displayed on the screen are AUTO and .

In the user defined program, the temperature for each time section is set by the user.

3. Manual Mode:

In this mode, the icon displayed on the screen is .

The thermostat controls the temperature at a constant temperature setting, and the default temperature is 20℃. The temperature can be adjusted with ▲key or ▼key .

4. Antifreeze Mode

In this mode, the icon displayed on the screen is

The thermostat controls the system to prevent the ambient temperature from dropping below the pre-set antifreeze temperature, in order to keep the equipment and pipes free from freezing. This temperature is set in the anti-freeze mode, and the default valve is 5℃.

5. Switch between Run Modes

Press the key to turn on the thermostat.

After turnning on the thermostat, you may press menu key to switch the run modes between: factory preset mode, user defined mode, manual mode and antifreeze mode.

----------Setting----------

During setting, the thermostat is temporarily inactive. When finishing the setting, press the OK key to confirm. If there is no operation of any key in 60 seconds, the thermostat will automatically turn into run mode and then activate the control switch according to the pre-set program.

1. ADJUST Temperature Adjustment Setting

A) Press SET key. The screen will display ADJUST.

B) Press ▲ or ▼ to set the calibration temperature value. The default value is 0 ^{0}C, the adjustment range is -3 ^{0}C to +3 ^{0}C.

C) End of Temperature Adjustment Setting: Press OK key to confirm and exit Temperature adjustment setting, returning to the run mode.

2. Date / Time Setting

Set the current date , hour and minute

A) When you finish the Temperature adjustment setting, press SET key again, then it will enter into the Time setting, The screen will display .

B) When the frame displaying the present date starts flashing, press ▲ key or ▼ key to adjust the present weekday, and press SET key to turn to next setting

C) Then the number representing the hour flashes, press ▲ key or ▼ key to adjust the present hour, and press SET key to turn to next setting

D) Then the number representing the minute flashes, press ▲ key or ▼ key to adjust the present minute, and press SET key to turn to next setting

D) End of Time Setting: Press OK key to confirm and exit the time setting, returning to the run mode.

3. Temperature Setting

Set the Comfortable temperature, Economic temperature and Antifreeze temperature

The setting range of the comfortable temperature is 5÷35℃,the pre-set value is 20℃

The setting range of the economic temperature is 5÷35℃,the pre-set value is 18℃

The setting range of the antifreeze temperature is 5÷35℃,the pre-set value is 5℃

A) When you finish the Time setting, press SET key again, then it will enter into the Temperature setting, The screen will display .

B) In this case, the temperature icon will be displayed on the left side of temperature digit, while the temperature digit will blink. Press or to set the value of comfortable temperature, and press SET key to turn to next setting

C) In this case, the economic temperature icon will be displayed on the left side of temperature digit, while the temperature digit will blink. Press or to set the value of economic temperature. and press SET key to turn to next setting.

D) In this case, the low temperature icon will be displayed, while the temperature digit will blink. Press or to set the value of Antifreeze temperature, and press SET key to turn to **Temperature adjustment setting** setting.

E) End of Temperature Setting: Press OK key to confirm and exit the time setting, returning to the run mode.

4. User Defined Program Setting

Set the control temperature for 7 days and for each time interval

A) Press SET key for 3 seconds, The screen will display .

B) In this case, the icon and number indicating the weekday will blink. Press or to adjust the day. Press SET key to turn to next step, setting the temperature for each hour.

C) Then, the icons from 0:00 to 1:00 and the preset temperature icon (i.e. the icon on the left side of the temperature digit) will start to blink. Press or to select the desired temperature and press

SET key to turn to next one hour setting.

D) Repeat the above steps until completing the temperature settings for 24 hours. Then, return to date selection. During program setting, to return to the previous hour setting press and hold the key. Or to return to the day selection press and hold the SET key. The temperature for any unset hours remains the default or preset temperature.

E) The day icon will start to blink again, and repeat above process for each day.

F) End of Program Setting: press OK key to confirm, exit settings and enter directly into user defined run mode. In the screen display area, the icons AUTO and will be displayed.

Copy One-day Program

After entering a day program you can copy this into another day to save time when creating a weekly program: For example, if you want to copy the program of Monday to Thursday, the methods are as follows:

A）Select the program for Monday: in the user defined mode , press key or key The outer frame for Monday flashes to select Monday and press key, the icon COPY appears on the screen

B. Copy to selected day: Press key or key to select day, then press key to finish the copying and the icon COPY disappears.

C. At this time the selected day cursor flashes, press SET key to confirm.

D. Copying for other days, repeat steps A to B.

5. Switch from Setting to Run Mode:

Under the Temperature Adjustment Setting, Time Setting or Temperature Setting modes, just press OK key to enter into the Run Mode. If there is no operation of any key in 60 seconds, the thermostat will turn into run mode and then activate the control switch according to the temperatures set.

Under the Program Setting, press OK key to enter into the User Defined Mode.

6. Temporary Change of Temperature

Both at AUTO mode and at AUTO and mode,you can temporarily change the temperature at a program period.

For example: You have set the program already for a comfort temperature of 20 ^{0}C between 8:00~12:00, but you want to lower the temperature to 18 ^{0}C at 10:40, then you set the temperature

to 18 ^{0}C . This setting will not exist forever, it will remain until 12:00 when the program period is ended. At the program running mode, set the required temperature directly through ▲ key or ▼ key, the number representing the temperature will flash, press OK key to confirm and stop flashing. Without any adjustment in 5 seconds, the number representing the temperature will stop flashing and continuously to display the present room temperature. The thermostat will recover to automatic mode at the following program temperature change.

7. Code Matching (Only used for RF /MRF model)

RF Model: Press the receiver key, so that the receiver indicator will blink. If the transmitter is energized, turn off the transmitter LCD and then hold down▲ and ▼ keys simultaneously until the indicator stops blinking. In this case, the code matching is finished. (Note: If no code matching signal is received during 1 minute when the indicator keeps blinking, this indicator will turn dark and the code matching will be stopped. Pressing the key again, the thermostat will again enter into code matching state).

WH611 MRF Model: Press the receiver key, so that the indicator will blink in “one flash and one stop”. The thermostat will enter into the 1st channel code matching state. The code matching operation is same as RF model. After completing the code matching, press the key again to start the 2nd channel code matching, in which case the indicator will blink in “two flashes after one stop”. The thermostat then enters into code matching state. After completing the code matching, press the key again to start the 3rd channel code matching, in which case the indicator will blink in “three flashes after one stop”. The code matching is then started. Likewise, press the key for the fourth time to start the 4th channel code matching, in which case the indicator will blink in “four flashes and one stop”.

8. Fault Display:

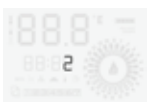
When the room temperature is lower than 0**℃, the LCD will blink in 00.0℃ When the room** temperature is higher than 0**℃, the LCD will resume automatically to normal display.**

When the room temperature is higher than**℃5, the LCD will blink in 45.0℃ When the room** temperature is lower than 45.0**℃, the LCD will resume automatically to normal display.**

Upon disconnection of the temperature sensor, the display will blink in E0.1, in which case you shall check and eliminate the fault.

9. Engineering Setting

Hold down SET key for 5 seconds in OFF state, the place where the time is displayed will show the setting number, while the place where the temperature is displayed will show the set parameters. Press ▲ or ▼ to change the parameter setting, and press SET key to enter into next setting. You may press OK key to confirm and exit the setting of engineering parameters. If no operation of any key within 60 seconds, it will save and exit, then return to OFF state.

Setting Number	Notes on Numbering	Adjustable Range	Three-Digit where temperature is displayed(The value to be set will blink ）		Remarks
	Temperature difference from stop to restart or cycles per hour	Temperature difference from stop to restart: 0.2℃	00.2		
		Temperature difference from stop to restart: 0.5℃	00.5		
		Temperature difference from stop to restart: 1.0℃	01.0		
		Temperature difference from stop to restart: 1.5℃(Default Value)	01.5		
		Temperature difference from stop to restart: 2.0℃	02.0		
		Temperature difference from stop to restart: 2.5℃	02.5		
		Temperature difference from stop to restart: 3.0℃	03.0		
		Temperature difference from stop to restart: 3.5℃	03.5		
		Temperature difference from stop to restart: 4.0℃	04.0		
		1 On/Off per hour	101		
		2 On/Off per hour	102		
		3 On/Off per hour	103		
		4 On/Off per hour	104		
		5 On/Off per hour	105		
		6 On/Off per hour	106		
		7 On/Off per hour	107		
		8 On/Off per hour	108		
		9 On/Off per hour	109		
		10 On/Off per hour	110		
		11 On/Off per hour	111		
		12 On/Off per hour	112		
	Set the state after turning off the screen	Disconnected (Default)）	No display for the first two digits	0	
		Connected	No display for the first two digits	1	
		Energy-saving State	No display for the	2	

			first two digits		
	Switch between **℃** and ℉	Display in **℃ (Default)**	No display for the first two digits	0	
		Display in ℉	No display for the first two digits	1	
	Keypad	Keypad not activated (Default)	No display for the first two digits	0	
		Lock SET key	No display for the first two digits	1	
		Lock all keys	No display for the first two digits	2	
	Highest temperature of heating	10—35**℃ (Adjustable by** 0.1**℃), Default Value 35℃**	Display of setting temperature		
	Selection of engineering parameters	Parameters set in factory	No display for the first two digits	0	
		Parameters set by customer (Default)	No display for the first two digits	1	

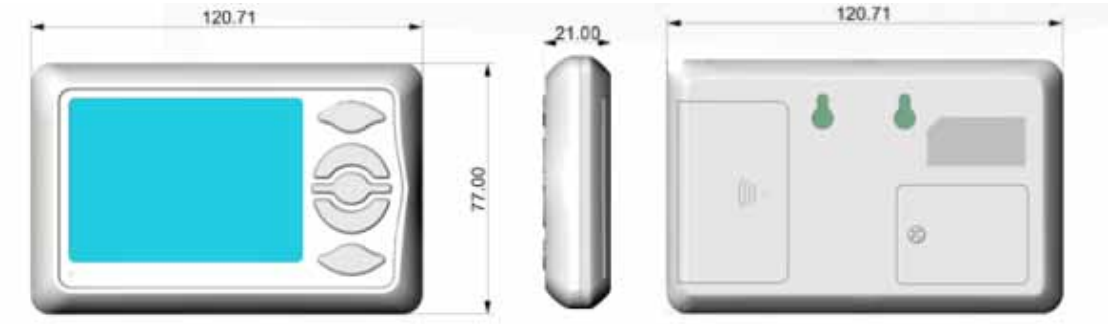
Fault Repair

Problem	Possible Cause	How to Repair
The thermostat does not work	1. Not connected to power supply.	1.Battery seat: Check if the battery contact is in good condition.
The heating system cannot be started.	2. If the preset temperature is higher than the temperature currently on display.	2. Adjust the preset temperature higher.
The mode switch doe not work.	3. Check if the keypad is locked. 4. Check if the unit is stopped.	3.Enter engineering setting and change the keypad lock mode of number 4. 4.Start the unit.
The Up, Down or OK key does not work.	5. Check if the keypad is locked. 6. Check if the unit is stopped.	5.Enter engineering setting and change the keypad lock mode of number 4. 6.Start the unit.
The room temperature displayed on the screen is not compliant with the actual temperature.	7. If the equipment is under run state. 8. If set to temperature calibration.	7. If the equipment is running, indicating that the temperature is in the process of heating / cooling. The two temperatures will be equal when the equipment finishs operation. 8. Change the Adjustment Temperature Setting

Cautions on Installation and Use:

1. To prevent the thermostat display from a high fluctuation, special treatment has been made to the program. Therefore, it is normal that the thermostat cannot immediately display the sudden change of temperature.
2. The thermostat installed in standard 86 box shall be placed 1.5m above the ground.
3. For the thermostat installed in standard 86 box or wireless thermostat with battery seat, take care not to install it to the wall corner, door / window side or behind the door or in such unheated area as exterior wall. Avoid hot / cold air duct, radiator, flue or thermal pipe. Do not place in direct sunlight.
4. If the wireless thermostat with battery seat is placed at a position where the air ventilation is poor, the temperature displayed on the thermostat might be inconsistent to the indoor average temperature.
5. Only the professional technicians are permitted to open the transmitting and receiving box of the thermostat for installation. When installing the power supply, make sure that the power cable is well insulated.
6. To install the receiving box, please install the base plate firstly and then connect the power and signal wire correctly before installing the upper cover and fix it. The thermostat is unrepairable product. The user shall not open the internal circuit board.
7. Before installing the thermostat, make sure that the system is disconnected. The maximum voltage of the system shall meet the requirements specified in the Instruction Manual (Max. AC Voltage: 250V).

Dimensions WMTE-701 Thermostat



1、Wiring Terminals

Wiring Terminal	Remarks
N	AC Neutral
L	AC Live
1	NO (Normally-Open point)
2	COM (Public terminal of relay)
3	NC (Normally-Closed point)

2、Description of Terminals WMTE-701R4

Terminal	Description
N	Neutral
L	Live
1	Terminal 1 activated by thermostat connected to channel 1
2	Terminal 2 activated by thermostat connected to channel 2
3	Terminal 3 activated by thermostat connected to channel 3
4	Terminal 4 activated by thermostat connected to channel 4
5	Terminal Normally Open Contact (relay) activated from any channel
6	Terminal Normally Open Contact (relay) activated from any channel

3、Description Symbols

Symbol	Description
C	Boiler
E	Solenoid
T	Thermo-valve

Examples of Installation

Fig. 1 Mono-zone Configuration with Boiler

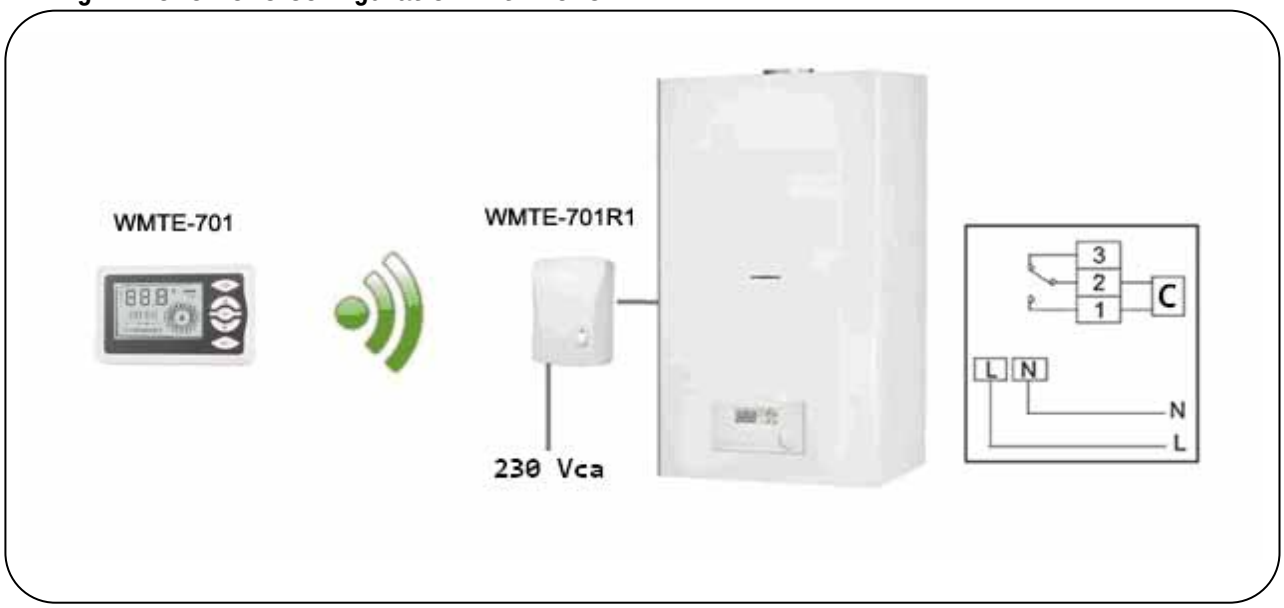


Fig. 2 Mono-zone Configuration with Solenoid

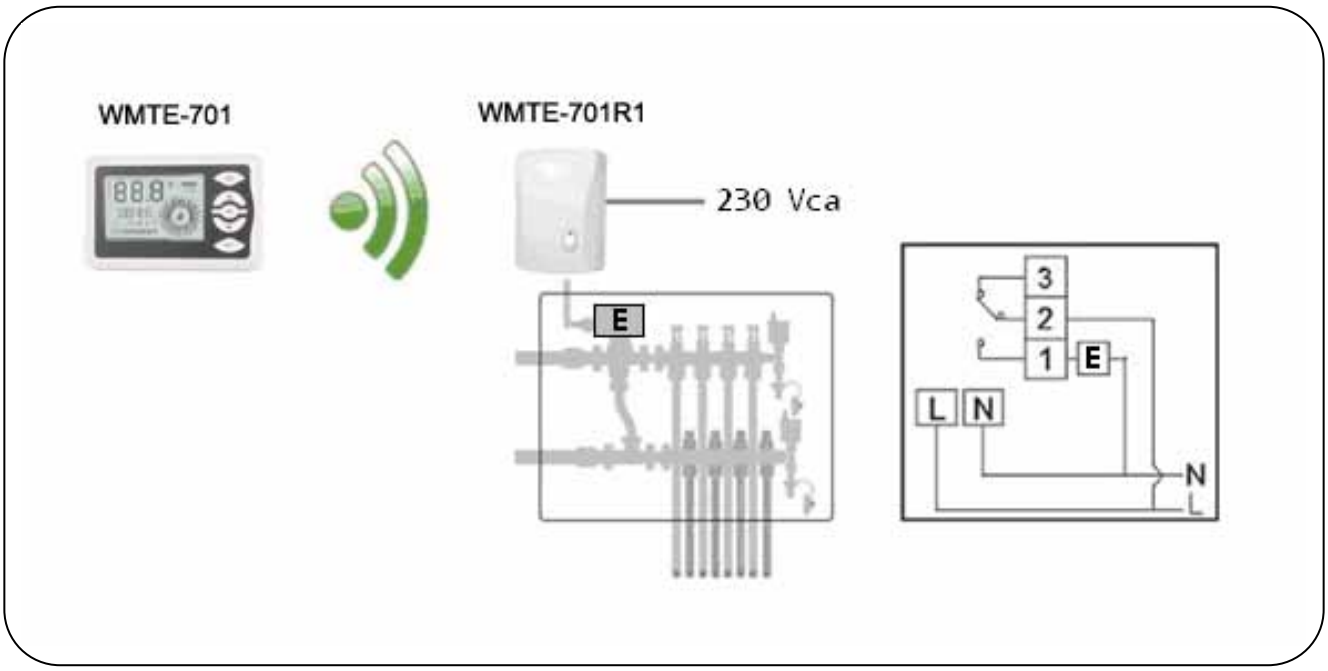


Fig. 3 Multi-zone Configuration with Thermal-actuators

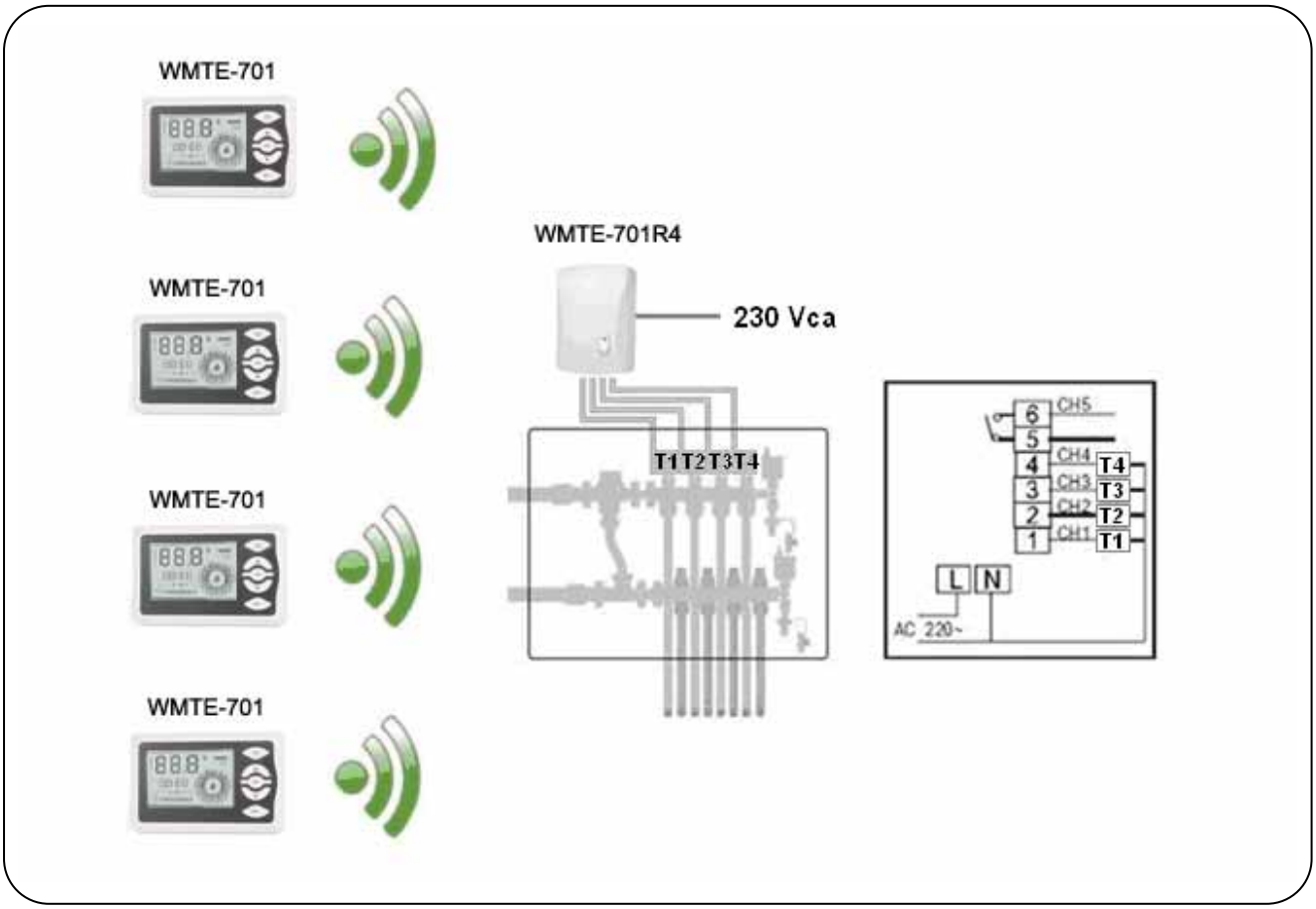
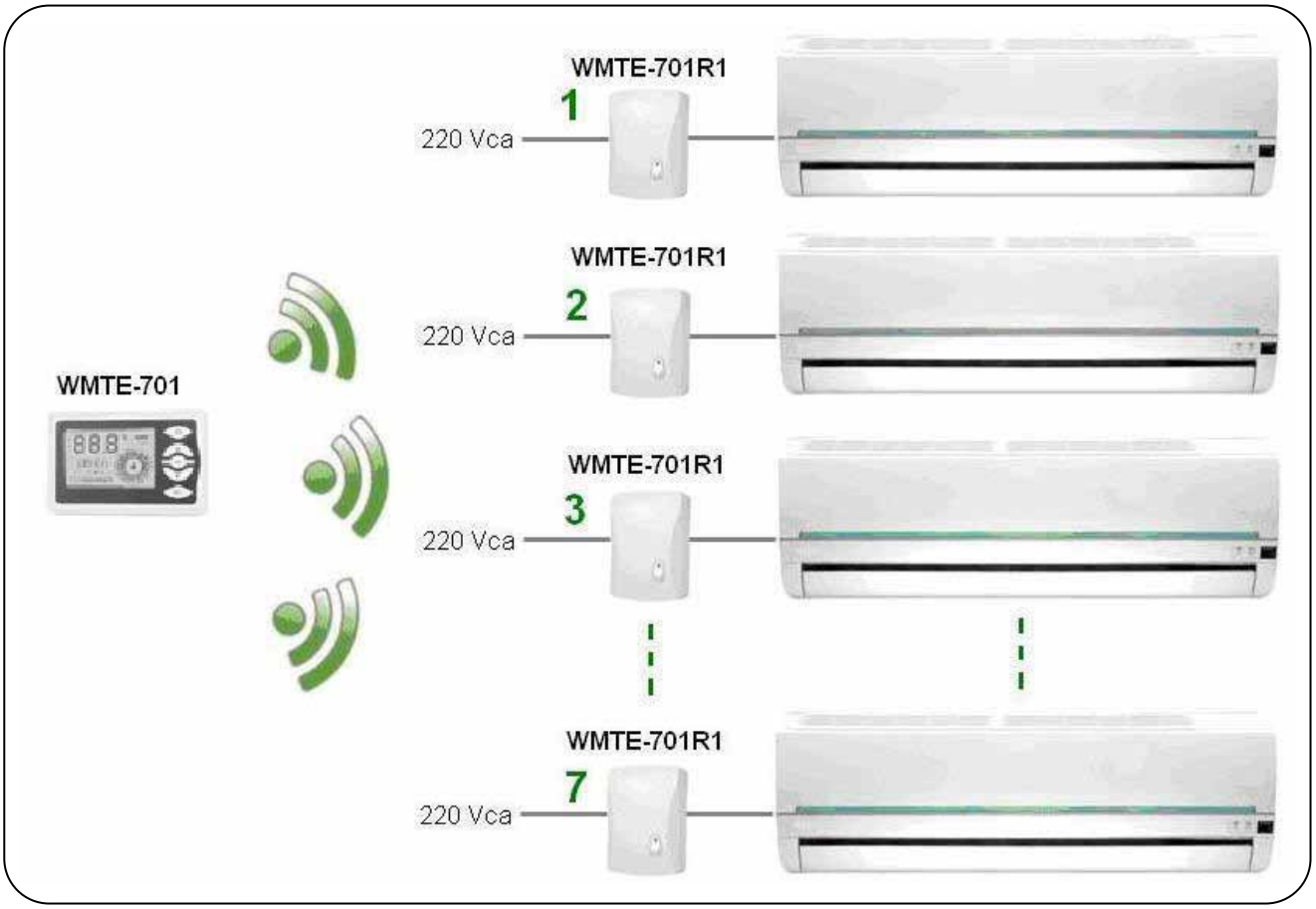


Fig. 4 Mono-zone Configuration with Multi-point Splitter



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